

**AIR QUALITY CONTROL
GENERAL PERMIT
APPLICATION PACKET**

for

HOT MIX ASPHALT PLANTS



Arizona Department of Environmental Quality
Air Quality Division

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INTRODUCTION

To expedite the processing of an air quality control permit application, the Arizona Department of Environmental Quality (ADEQ) has created a general permit for hot mix asphalt plants. This general permit also gives the Permittee the option of co-locating a crushing and screening plant and/or a concrete batch plant with their hot mix asphalt plant. Facilities which meet the criteria in this general permit application will be permitted under the hot mix asphalt plant general permit and will pay lower annual air quality fees than plants covered under an individual air quality permit. This is due to the fact that the processing time is greatly reduced when a complete application is submitted.

This application packet assists the applicant in the submittal of information that is required to process their application for an air quality control permit. Applicants wishing to obtain a hot mix asphalt plant general permit shall apply to ADEQ, except for facilities located on an Indian Reservation or in Pima, Pinal, or Maricopa Counties. If the facility is located on the reservation or in one of these counties, the local air quality agency will process the air quality permit application.

If the applicant has any questions regarding jurisdictional issues, please contact ADEQ's Air Quality Permit Section at (602) 771-2337.

DISCLAIMER

This application packet does not waive the rights of the Director as provided under Arizona Administrative Code (A.A.C.) R18-2-304 to request that additional information be submitted by the applicant to assist in the processing of the air quality permit application. Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, an applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date they filed a complete application, but prior to the release of a proposed permit. If there is any difference between this application packet and Title 18, Chapter 2, of the A.A.C., the A.A.C. shall take precedence.

PERMIT ISSUANCE TIME FRAME

According to A.A.C. R18-1-525, ADEQ has 21 business days to determine if the submitted general permit application is complete. Once the application is determined to be complete, the department has 103 business days to make a licensing decision on the application. The counting of the days can be suspended by the Department upon the determination that additional information is needed. In such a case, a letter will be sent to the applicant informing them that the counting of days has been suspended, and will also specify what additional information is necessary to continue processing the application.

APPLICATION INSTRUCTIONS

ADEQ recognizes that asphalt plants, in general, move frequently. The information provided in the application should reflect the most recent configuration and location.

STEP 1: STANDARD APPLICATION FORM

On the Standard Application Form, Form A found in the appendix, items 1 through 4 are self-explanatory. The remaining items are explained in detail below.

Item #5 requests the name, phone number, and fax number of the owner's agent. This should be the person or company assisting the Permittee with their air quality permit application.

Item #6 requests the name, phone number, and fax number of the Plant/Site Manager or Contact person. This should be the person that ADEQ may contact with any questions or requests for additional information.

Item #7 requests the location of the plant, including its physical address. This information must be as detailed as possible to determine the exact operating location of the proposed plant.

Item #8 requests the purpose of the equipment. The response should describe what is produced at the plant.

Item #9 requests the type of organization. If the "other" box is checked, please be specific as to what the organization is.

Item #10 requests several specific pieces of information with regards to the type of permit that the applicant is requesting. If the plant is already permitted and is applying for a permit revision or renewal, then the current permit number must be included. The Date of Commencement of Construction or Modification is the anticipated date that construction will begin in the case of a permit revision or new permit application. The Standard Industrial Classification Code for hot mix asphalt plants is 2951.

Items #11 and #12 request the name, signature, and phone number of the responsible official. The responsible official in most cases is the owner or a partner of the company. It may also be the president or vice-president of larger companies. If there is a question as to who the responsible official is, please consult A.A.C. R18-2-301(10).

STEP 2: PERMIT APPLICABILITY VERIFICATION

Complete the permit applicability verification questions found on Form B to ensure that the facility does qualify for a hot mix asphalt plant general permit. If the facility does not qualify for coverage under the general permit, then a permit application for an individual hot mix asphalt plant permit must be completed and submitted to ADEQ.

STEP 3: PROCESS DESCRIPTION

Please provide a complete description of the manufacturing process. The description should begin with the raw materials and end with the finished product, including how the process material is received, processed, stored, and mixed, as well as how the final products are handled. The process description must include the amount of material the plant is able to process.

The process description should be accompanied by a process flow diagram. This diagram should depict all the processes and pollution abatement equipment. The reviewer should be able to read the process description while looking at the process flow diagram, and relate exactly what is happening to the raw materials and products.

If the hot mix asphalt plant is co-located with a crushing and screening plant and/or concrete batch plant, then the additional equipment must be described in detail as discussed in the two previous paragraphs.

STEP 4: CALCULATION OF EMISSIONS

Air pollutant emission rate information must be provided in Forms C-1 through C-10 found in the appendix. These forms provide worksheets to assist the applicant in calculating emission rates from the various processes associated with the hot mix asphalt plant operations and co-located crushing and screening and/or concrete batch plant operations (if applicable). The emission factors used have been taken from an ADEQ memo titled "Emission Guidance Document for Hot Mix Asphalt Operations", dated February 12, 1998, the Environmental Protection Agency's FIRE documents, and from the current Crushing and Screening Plant Permit Application and the current Concrete Batch Plant Permit Application.

Form D in the appendix should be used to calculate the synthetic minor operating hours limitation.

STEP 5: MAP OF PLANT LOCATION

Please provide a map of the current plant location. This may be a city map, topographical map, or any other map which clearly shows the location. The map should include driving directions to the plant site from the nearest highway.

STEP 6: PLOT PLAN

Please provide a plot plan of the current equipment configuration. A plot plan is an aerial drawing of the plant property drawn to scale or with the dimensions clearly labeled. It should include:

1. Clearly identified property boundaries;
2. All buildings with their respective dimensions (length, width, and height);
3. A schematic of the typical equipment layout;
4. Location of all stacks, tanks, silos, bins, conveyors, storage piles, control equipment, and all other equipment;
5. Clearly identified and numbered emission points which correspond to the emission sources form;
6. A north arrow;
7. A scale if the drawing is to scale;

8. Adjacent streets and roads; and
9. Location, length, and width of haul roads.

STEP 7: EQUIPMENT LIST

ADEQ needs to be able to identify all pieces of equipment covered under each permit. Use Form E found in the appendix to provide a list of all pieces of equipment to be permitted. The list should include the type of equipment, make, model, serial number, date of manufacture, and equipment identification number for each piece of equipment.

If the equipment has not yet been purchased, the serial number does not need to be listed, but an equipment identification number will need to be provided. The equipment identification number must be clearly stenciled on each piece of equipment once the equipment has been purchased.

In addition, the application must include the manufacturer's operating specifications for the equipment utilized at the facility.

STEP 8: DESCRIPTION OF AIR POLLUTION CONTROL EQUIPMENT AND PROCEDURES

All air pollution control equipment and air pollution control procedures must be described in Form F found in the appendix.

STEP 9: COMPLIANCE PLAN, COMPLIANCE SCHEDULE, AND CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS

A Compliance Certification and Certification of Truth, Accuracy, and Completeness must be submitted using Form G found in the appendix.

STEP 10: NOTICE OF START-UP, MOVE, OR STOP FOR PORTABLE SOURCES AND MINE EQUIPMENT

The applicant needs to complete Form H located in the appendix when they start-up their facility, when they move the facility from one location to another, or when they stop operations all together. The form is self-explanatory, however, if you have any questions, please contact ADEQ's Air Quality Permit Section at (602) 771-2337.

STEP 11: FILING INSTRUCTIONS

The applicant needs to mail the application, including a check or money order for the \$500 application fee, to the following address:

**Air Quality Permits Section
Arizona Department of Environmental Quality
1110 West Washington
Phoenix, AZ 85007**

APPENDIX

| | | |
|---------|---|----|
| Form A: | Standard Permit Application Form | 9 |
| Form B: | Permit Applicability Verification | 11 |
| Form C: | Emission Calculations | 14 |
| C-1: | Drum Mix Process - Rotary Drum Dryer - Fabric Filter/Venturi Scrubber - Natural Gas Fired | 14 |
| C-2: | Drum Mix Process - Rotary Drum Dryer - Fabric Filter/Venturi Scrubber - Diesel/Waste Oil Fired | 16 |
| C-3: | Batch Mix Process - Rotary Drum Dryer - Fabric Filter/Venturi Scrubber - Natural Gas Fired | 18 |
| C-4: | Batch Mix Process - Rotary Drum Dryer - Fabric Filter/Venturi Scrubber - Diesel/Waste Oil Fired | 20 |
| C-5: | Controlled Fugitive Particulate Matter Emissions from the Hot Mix Asphalt Plant | 22 |
| C-6: | Asphalt Heater | 24 |
| C-7: | Facility Generator(s) | 26 |
| C-8: | Controlled Fugitive Particulate Matter Emissions from the Crushing & Screening Plant (if applicable) | 28 |
| C-9: | Controlled Fugitive Particulate Matter Emissions from the Concrete Batch Plant (if applicable) | 34 |
| C-10: | Total Emissions from the Facility | 36 |
| Form D: | Synthetic Minor Limit Calculations | 37 |
| Form E: | Equipment List | 38 |
| Form F: | Air Pollution Control Equipment | 39 |
| Form G: | Compliance Certification/Certification of Truth, Accuracy, and Completeness | 40 |
| Form H: | Move Notice Form | 41 |
| Form I: | Fee Summary | 43 |

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FORM A: STANDARD PERMIT APPLICATION FORM

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Air Quality Division

1110 West Washington g Phoenix, Arizona 85007 g Phone: (602) 771-2338

STANDARD PERMIT APPLICATION

(As required by A.R.S. § 49-426, and Chapter 2, Article 3, Arizona Administrative Code)

1. Permit to be issued to: (Business license name of organization that is to receive permit) _____

2. Mailing Address: _____
City: _____ State: _____ ZIP: _____
3. Previous Company Name: (if applicable) _____
4. Name (or names) of Owners/Principals: _____
Fax #: _____ Phone: _____
5. Name of Owner's Agent: _____
Fax #: _____ Phone: _____
6. Plant/Site Manager/Contact Person and Title: _____
Fax #: _____ Phone: _____
7. Plant Site Name: _____
Plant Site Location/Address: _____
City: _____ County: _____ ZIP: _____
Indian Reservation (if applicable, which one): _____
Latitude/Longitude, Elevation: _____
8. Equipment Purpose: _____
Equipment List/Description: _____

9. Type of Organization:
~ Corporation ~ Individual Owner
~ Partnership ~ Government Entity (Government Facility Code): _____
~ Other _____
10. Permit Application Basis: ~ New Source ~ Revision
(Check all that apply) ~ Portable Source : General Permit
~ Renewal of existing Permit
For renewal or modification, include existing permit number (and expiration date): _____
Date of Commencement of Construction or Modification: _____
Is any of the equipment to be leased to another individual or entity? ~ Yes ~ No
Standard Industrial Classification Code: _____ 2951 _____ State Permit Class: II
11. Signature of Responsible Official of Organization: _____
Official Title of Signer: _____
12. Typed or Printed Name of Signer: _____
Date: _____ Telephone Number: _____

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FORM B: PERMIT APPLICABILITY VERIFICATION

The following questions have been developed to determine if your facility qualifies for coverage under the hot mix asphalt plant general permit or is required to obtain an individual air quality permit pursuant to A.A.C. R18-2-302. For the purposes of this applicability verification, it is assumed that the only emission units at this facility, other than fugitive emissions, are the rotary drum dryer, asphalt heater(s), and the facility generator(s). If any other emission units exist at this facility, another application may need to be completed. If this is the case, please contact the ADEQ Permit Section at (602) 771-2337.

General Permit Applicability

- A. Does the hot mix asphalt plant have a maximum throughput greater than 500 tons per hour?
- 9 YES 9 NO** If the answer is **YES**, this facility does not qualify for coverage under the general permit and must obtain an individual permit.
If the answer is **NO**, proceed to Question B.
- B. Is the combined maximum fuel usage capacity of all asphalt heaters utilized at the facility greater than 50 gallons per hour?
- 9 YES 9 NO** If the answer is **YES**, this facility does not qualify for coverage under the general permit and must obtain an individual permit.
If the answer is **NO**, proceed to Question C.
- C. Does the facility co-locate a crushing and screening plant with the hot mix asphalt plant?
- 9 YES 9 NO** If the answer is **YES**, proceed to Question D.
If the answer is **NO**, proceed to Question E.
- D. Does the co-located crushing and screening plant have a maximum throughput greater than 500 tons per hour?
- 9 YES 9 NO** If the answer is **YES**, this facility does not qualify for coverage under the general permit and must obtain an individual permit.
If the answer is **NO**, proceed to Question E.
- E. Does the facility co-locate a concrete batch plant with the hot mix asphalt plant?
- 9 YES 9 NO** If the answer is **YES**, proceed to Question F.
If the answer is **NO**, proceed to Question G.

F. Does the co-located concrete batch plant have a maximum throughput greater than 872 cubic yards per day when operating to any extent under generator power, or 966 cubic yards per day when operating exclusively under commercial power?

9 YES 9 NO **If the answer is YES**, this facility does not qualify for coverage under the general permit and must obtain an individual permit.
If the answer is NO, proceed to Question G.

G. Is the total horsepower rating of all generators used at the facility, including any co-located operations and internal combustion engines, greater than 2350 horsepower?

9 YES 9 NO **If the answer is YES**, this facility does not qualify for coverage under the general permit and must obtain an individual permit.
If the answer is NO, proceed to Question H.

H. Does your facility meet all of the following stack parameter criteria?

- * The height above ground of the drum dryer stack is 22 feet or greater.
- * The height above ground of all generator stacks is 12 feet or greater.
- * The height above ground of all asphalt heater stacks is 14 feet or greater.
- * All stacks located within 5L (where "L" is the lesser of the building height or width) of a building (either on-site or off-site) are $5L$ (where "H" is the building height), or the stack is located more than 5L away from any buildings (either on-site or off-site).

9 YES 9 NO **If the answer is YES**, proceed to Question J.
If the answer is NO, proceed to Question I.

I. Will the facility be able to adjust their stacks to comply with the requirements in Question H above?

9 YES 9 NO **If the answer is YES**, proceed to Question J.
If the answer is NO, this facility does not qualify for coverage under the general permit and must obtain an individual permit.

J. Does the rotary drum dryer burn any fuels other than natural gas, diesel fuel, or waste oil?

9 YES 9 NO **If the answer is YES**, this facility does not qualify for coverage under the general permit and must obtain an individual permit.
If the answer is NO, proceed to Question K.

K. Do the asphalt heater(s) and generator(s) burn any fuels other than diesel fuel, natural gas, or LPG?

9 YES 9 NO **If the answer is YES**, this facility does not qualify for coverage under the general permit and must obtain an individual permit.

If the answer is NO, proceed to Question L.

L. Will the facility be able to limit its operating hours to the number of hours calculated in Form D?

9 YES 9 NO **If the answer is YES**, this facility qualifies for coverage under the general permit.

If the answer is NO, this facility does not qualify for coverage under the general permit and must obtain an individual permit.

FORM C: EMISSION CALCULATIONS

TABLE C-1: DRUM MIX PROCESS - ROTARY DRUM DRYER - NATURAL GAS FIRED CONTROL DEVICE: FABRIC FILTER BAGHOUSE/VENTURI SCRUBBER

The following tables must be completed in order to calculate the controlled emissions from the rotary drum dryer when it is burning natural gas and using a drum mix process.

Rotary Drum Dryer Description: Make: _____ Model: _____ Serial Number: _____

Air Pollution Control Description: Type (i.e. baghouse or venturi scrubber): _____

Make: _____ Model: _____ Serial Number: _____

Stack Information: Height Above Ground (feet): _____ Height Above Structure (feet): _____

Exhaust Temperature (°F): _____ Diameter (feet): _____ Velocity (feet/sec): _____

Table C-1(a) must be completed in order to calculate the controlled potential to emit of particulate matter from the rotary drum dryer when it is burning natural gas, using a drum mix process, and utilizing either a fabric filter baghouse or venturi scrubber as the air pollution control device. The emissions, in tons per year, from the rotary drum dryer are calculated by taking the maximum capacity listed in column (a) and multiplying it by the emission factor in columns (b) or (c) and the conversion factor in column (d).

Table C-1(a): Controlled Potential to Emit of Particulate Matter

| Air Pollution Control Device | Maximum Capacity (a) | PM Emission Factor (b) | PM-10 Emission Factor (c) | Conversion Factor (d) | PM Emissions (axbxd) | PM-10 Emissions (axcxd) |
|---------------------------------|----------------------------|------------------------------|---------------------------------|--------------------------|----------------------------|-------------------------------|
| | (tons/hr) | (lb/ton of asphalt) | (lb/ton of asphalt) | (tons/yr)/(lbs/hr) | (tons/yr) | (tons/yr) |
| Fabric Filter | | 0.018 | 0.0081 | 4.38 | | |
| Venturi Scrubber | | 0.037 | 0.015 | 4.38 | | |

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| Reviewed By | Date |
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Table C-1(b) must be completed in order to calculate the potential to emit for the remaining pollutants from the rotary drum dryer when it is burning natural gas and using a drum mix process. The emissions, in tons per year, from the rotary drum dryer are calculated by taking the maximum capacity listed in column (b) and multiplying it by the emission factor for each pollutant in column (c) and the conversion factor in column (d).

Table C-1(b): Potential to Emit for Remaining Pollutants

| Pollutant (a) | Maximum Capacity (b) | Emission Factor (c) | Conversion Factor (d) | Emissions (bxcxd) |
|--------------------------|---------------------------------|--------------------------------|----------------------------------|------------------------------|
| | <i>(tons/hr)</i> | <i>(lb/ton)</i> | <i>(tons/yr)/(lbs/hr)</i> | <i>(tons/yr)</i> |
| CO | | 5.60E-02 | 4.38 | |
| NO _x | | 3.00E-02 | 4.38 | |
| SO _x | | 3.30E-03 | 4.38 | |
| VOCs | | 5.10E-02 | 4.38 | |

| Reviewed By | Date |
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FORM C: EMISSION CALCULATIONS

**TABLE C-2: DRUM MIX PROCESS - ROTARY DRUM DRYER - DIESEL/WASTE OIL FIRED
CONTROL DEVICE: FABRIC FILTER BAGHOUSE/VENTURI SCRUBBER**

The following tables must be completed in order to calculate the controlled emissions from the rotary drum dryer when it is burning diesel fuel or waste oil and using a drum mix process.

Rotary Drum Dryer Description: Make: _____ Model: _____ Serial Number: _____

Air Pollution Control Description: Type (i.e. baghouse or venturi scrubber): _____

Make: _____ Model: _____ Serial Number: _____

Stack Information: Height Above Ground (feet): _____ Height Above Structure (feet): _____

Exhaust Temperature (°F): _____ Diameter (feet): _____ Velocity (feet/sec): _____

Table C-2(a) must be completed in order to calculate the controlled potential to emit of particulate matter from the rotary drum dryer when it is burning diesel fuel or waste oil, using a drum mix process, and utilizing a fabric filter baghouse or venturi scrubber as the air pollution control device. The emissions, in tons per year, from the rotary drum dryer are calculated by taking the maximum capacity listed in column (a) and multiplying it by the emission factor in columns (b) or (c) and the conversion factor in column (d).

Table C-2(a): Controlled Potential to Emit of Particulate Matter

| Air Pollution Control Device | Maximum Capacity (a) | PM Emission Factor (b) | PM-10 Emission Factor (c) | Conversion Factor (d) | PM Emissions (axbxd) | PM-10 Emissions (axcxd) |
|------------------------------|----------------------|------------------------|---------------------------|-----------------------|----------------------|-------------------------|
| | (tons/hr) | (lb/ton of asphalt) | (lb/ton of asphalt) | (tons/yr)/(lbs/hr) | (tons/yr) | (tons/yr) |
| Fabric Filter | | 0.048 | 0.038 | 4.38 | | |
| Venturi Scrubber | | 0.067 | 0.045 | 4.38 | | |

| Reviewed By | Date |
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Table C-2(b) must be completed in order to calculate the potential to emit for the remaining pollutants from the rotary drum dryer when it is burning diesel fuel or waste oil and using a drum mix process. The emissions, in tons per year, from the rotary drum dryer are calculated by taking the maximum capacity listed in column (b) and multiplying it by the emission factor for each pollutant in column (c) and the conversion factor in column (d).

Table C-2(b): Potential to Emit for Remaining Pollutants for Diesel Fuel-Fired Rotary Drum Dryer

| Pollutant (a) | Maximum Capacity (b) | Emission Factor (c) | Conversion Factor (d) | Emissions (bxcxd) |
|--------------------------|---------------------------------|--------------------------------|----------------------------------|------------------------------|
| | <i>(tons/hr)</i> | <i>(lb/ton)</i> | <i>(tons/yr)/(lbs/hr)</i> | <i>(tons/yr)</i> |
| CO | | 3.60E-02 | 4.38 | |
| NOx | | 7.50E-02 | 4.38 | |
| SOx | | 5.60E-02 | 4.38 | |
| VOCs | | 6.90E-02 | 4.38 | |

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FORM C: EMISSION CALCULATIONS

TABLE C-3: BATCH MIX PROCESS - ROTARY DRUM DRYER - NATURAL GAS FIRED CONTROL DEVICE: FABRIC FILTER BAGHOUSE/VENTURI SCRUBBER

The following tables must be completed in order to calculate the controlled emissions from the rotary drum dryer when it is burning natural gas and using a batch mix process.

Rotary Drum Dryer Description: Make: _____ Model: _____ Serial Number: _____

Air Pollution Control Description: Type (i.e. baghouse or venturi scrubber): _____
Make: _____ Model: _____ Serial Number: _____

Stack Information: Height Above Ground (feet): _____ Height Above Structure (feet): _____
Exhaust Temperature (°F): _____ Diameter (feet): _____ Velocity (feet/sec): _____

Table C-3(a) must be completed in order to calculate the controlled potential to emit of particulate matter from the rotary drum dryer when it is burning natural gas, using a batch mix process, and utilizing either a fabric filter baghouse or venturi scrubber as the air pollution control device. The emissions, in tons per year, from the rotary drum dryer are calculated by taking the maximum capacity listed in column (a) and multiplying it by the emission factor in columns (b) or (c) and the conversion factor in column (d).

Table C-3(a): Controlled Potential to Emit of Particulate Matter

| Air Pollution Control Device | Maximum Capacity (a) | PM Emission Factor (b) | PM-10 Emission Factor (c) | Conversion Factor (d) | PM Emissions (axbxd) | PM-10 Emissions (axcxd) |
|------------------------------|----------------------|------------------------|---------------------------|-----------------------|----------------------|-------------------------|
| | (tons/hr) | (lb/ton of asphalt) | (lb/ton of asphalt) | (tons/yr)/(lbs/hr) | (tons/yr) | (tons/yr) |
| Fabric Filter | | 0.044 | 0.02 | 4.38 | | |
| Venturi Scrubber | | 0.056 | 0.025 | 4.38 | | |

| Reviewed By | Date |
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Table C-3(b) must be completed in order to calculate the potential to emit for the remaining pollutants from the rotary drum dryer when it is burning natural gas and using a batch mix process. The emissions, in tons per year, from the rotary drum dryer are calculated by taking the maximum capacity listed in column (b) and multiplying it by the emission factor for each pollutant in column (c) and the conversion factor in column (d).

Table C-3(b): Potential to Emit for Remaining Pollutants

| Pollutant (a) | Maximum Capacity (b) | Emission Factor (c) | Conversion Factor (d) | Emissions (bxcxd) |
|--------------------------|---------------------------------|--------------------------------|----------------------------------|------------------------------|
| | <i>(tons/hr)</i> | <i>(lb/ton)</i> | <i>(tons/yr)/(lbs/yr)</i> | <i>(tons/yr)</i> |
| CO | | 3.40E-01 | 4.38 | |
| NO _x | | 2.50E-02 | 4.38 | |
| SO _x | | 5.00E-03 | 4.38 | |
| VOCs | | 1.70E-02 | 4.38 | |

| Reviewed By | Date |
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FORM C: EMISSION CALCULATIONS

**TABLE C-4: BATCH MIX PROCESS - ROTARY DRUM DRYER - DIESEL/WASTE OIL FIRED
CONTROL DEVICE: FABRIC FILTER BAGHOUSE/VENTURI SCRUBBER**

The following tables must be completed in order to calculate the controlled emissions from the rotary drum dryer when it is burning diesel fuel or waste oil and using a batch mix process.

Rotary Drum Dryer Description: Make: _____ Model: _____ Serial Number: _____

Air Pollution Control Description: Type (i.e. baghouse or venturi scrubber): _____

Make: _____ Model: _____ Serial Number: _____

Stack Information: Height Above Ground (feet): _____ Height Above Structure (feet): _____

Exhaust Temperature (°F): _____ Diameter (feet): _____ Velocity (feet/sec): _____

Table C-4(a) must be completed in order to calculate the controlled potential to emit of particulate matter from the rotary drum dryer when it is burning diesel fuel or waste oil, using a batch mix process, and utilizing a fabric filter baghouse or venturi scrubber as the air pollution control device. The emissions, in tons per year, from the rotary drum dryer are calculated by taking the maximum capacity listed in column (a) and multiplying it by the emission factor in columns (b) or (c) and the conversion factor in column (d).

Table C-4(a): Controlled Potential to Emit of Particulate Matter

| Air Pollution Control Device | Maximum Capacity (a) | PM Emission Factor (b) | PM-10 Emission Factor (c) | Conversion Factor (d) | PM Emissions (axbxd) | PM-10 Emissions (axcxd) |
|------------------------------|----------------------|------------------------|---------------------------|-----------------------|----------------------|-------------------------|
| | (tons/hr) | (lb/ton of asphalt) | (lb/ton of asphalt) | (tons/yr)/(lbs/hr) | (tons/yr) | (tons/yr) |
| Fabric Filter | | 0.074 | 0.05 | 4.38 | | |
| Venturi Scrubber | | 0.086 | 0.055 | 4.38 | | |

| Reviewed By | Date |
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Table C-4(b) must be completed in order to calculate the potential to emit for the remaining pollutants from the rotary drum dryer when it is burning diesel fuel or waste oil and using a batch mix process. The emissions, in tons per year, from the rotary drum dryer are calculated by taking the maximum capacity listed in column (b) and multiplying it by the emission factor for each pollutant in column (c) and the conversion factor in column (d).

Table C-4(b): Potential to Emit for Remaining Pollutants for Diesel Fuel-Fired Rotary Drum Dryer

| Pollutant (a) | Maximum Capacity (b) | Emission Factor (c) | Conversion Factor (d) | Emissions (bxcxd) |
|--------------------------|---------------------------------|--------------------------------|----------------------------------|------------------------------|
| | <i>(tons/hr)</i> | <i>(lb/ton)</i> | <i>(tons/yr)/(lbs/hr)</i> | <i>(tons/yr)</i> |
| CO | | 6.90E-02 | 4.38 | |
| NOx | | 1.70E-01 | 4.38 | |
| SOx | | 2.40E-01 | 4.38 | |
| VOCs | | 4.60E-02 | 4.38 | |

| Reviewed By | Date |
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FORM C: EMISSION CALCULATIONS

TABLE C-5: CONTROLLED FUGITIVE PARTICULATE MATTER EMISSIONS FROM THE HOT MIX ASPHALT PLANT

Table C-5 must be completed in order to calculate the fugitive particulate matter emissions from the hot mix asphalt plant. Fugitive emissions, in tons per year, from the hot mix asphalt plant are calculated by taking the maximum capacity listed in column (a) and multiplying it by the emission factor for each pollutant in columns (b) or (c) and the conversion factor in column (d).

| Source of Particulate Emissions | Max. Throughput Rate (a) | PM Emission Factor (b) | PM-10 Emission Factor (c) | Conversion Factor (d) | PM Emissions (axbxd) | PM-10 Emissions (axcxd) |
|---|-----------------------------|----------------------------|------------------------------|---------------------------|-------------------------|----------------------------|
| | <i>(tons/hr)</i> | <i>(lb/ton of asphalt)</i> | <i>(lb/ton of asphalt)</i> | <i>(tons/yr)/(lbs/hr)</i> | <i>(tons/year)</i> | <i>(tons/year)</i> |
| Continuous and Batch Drop Operations | | 3.30E-04 | 1.60E-04 | 4.38 | | |
| Transfer Operations to Feed Hopper, Elevated Bins & Weigh Hoppers | | 3.30E-04 | 1.60E-04 | 4.38 | | |
| Cement Transfer to Silos | | 1.00E-05 | 3.40E-06 | 4.38 | | |
| Cement Transfer to Weigh Hoppers | | ND* | ND* | 4.38 | | |

* ND = Non-Detectible

| Source of Particulate Emissions | Number of Transfer/ Screening Points (a) | PM Emission Factor (b) | PM-10 Emission Factor (c) | Conversion Factor (d) | PM Emissions (axbxd) | PM-10 Emissions (axcxd) |
|---------------------------------|--|------------------------|---------------------------|-----------------------|----------------------|-------------------------|
| | | (lb/hr/point) | (lb/hr/point) | (tons/yr)/(lbs/hr) | (tons/year) | (tons/year) |
| Conveyor Transfer Points | | 9.30E-05 | 4.50E-05 | 4.38 | | |
| Screening Operations | | 1.70E-03 | 7.80E-04 | 4.38 | | |

To calculate the total PM and PM-10 emissions from all fugitive sources, add up all PM and PM-10 emissions from Table C-5.

| Source of Particulate Emissions | PM Emissions | PM-10 Emissions |
|---|--------------|-----------------|
| | (tons/year) | (tons/year) |
| TOTAL PM AND PM-10 EMISSIONS FROM ALL HOT MIX ASPHALT PLANT FUGITIVE SOURCES | | |

| Reviewed By | Date |
|-------------|------|
| | |

FORM C: EMISSION CALCULATIONS

TABLE C-6: ASPHALT HEATER

Tables C-6(a), (b), and (c) must be completed in order to calculate the emissions from the asphalt heater(s) when it is burning diesel fuel, natural gas, and LPG. Emissions from the asphalt heater, in tons per year, are calculated by taking the maximum fuel consumption listed in column (b) and multiplying it by the emission factor for each pollutant in column (c) and the conversion factor in column (d). An individual table needs to be completed for each heater that is located at the facility. Please make additional copies of this form if necessary.

Asphalt Heater Description: Make: _____ Model: _____ Serial Number: _____

Stack Information: Height Above Ground (feet): _____ Height Above Structure (feet): _____

Exhaust Temperature (°F): _____ Diameter (feet): _____ Velocity (feet/sec): _____

Table C-6(a): Diesel-Fired Asphalt Heater

| Pollutant (a) | Maximum Fuel Consumption (b) | Emission Factor (c) | Conversion Factor (d) | Emissions (bxcxd) |
|------------------|---------------------------------|------------------------|--------------------------|----------------------|
| | (gallons/hr) | (lb/gal) | (tons/yr)/(lbs/hr) | (tons/yr) |
| CO | | 5.00E-03 | 4.38 | |
| NO _x | | 2.00E-02 | 4.38 | |
| SO _x | | 4.60E-03 | 4.38 | |
| VOCs | | 2.00E-04 | 4.38 | |
| PM-10 | | 1.08E-03 | 4.38 | |

Table C-6(b): Natural Gas-Fired Asphalt Heater

| Pollutant (a) | Maximum Fuel Consumption (b) | Emission Factor (c) | Conversion Factor (d) | Emissions (bxcxd) |
|------------------|---------------------------------|------------------------|--------------------------|----------------------|
| | (gallons/hr) | (lb/gal) | (tons/yr)/(lbs/hr) | (tons/yr) |
| CO | | 2.80E-06 | 4.38 | |
| NO _x | | 1.30E-05 | 4.38 | |
| SO _x | | 8.00E-08 | 4.38 | |
| VOCs | | 3.70E-07 | 4.38 | |
| PM-10 | | 1.60E-06 | 4.38 | |

Table C-6(c): LPG-Fired Asphalt Heater

| Pollutant (a) | Maximum Fuel Consumption (b) | Emission Factor (c) | Conversion Factor (d) | Emissions (bxcxd) |
|------------------|---------------------------------|------------------------|--------------------------|----------------------|
| | (gallons/hr) | (lb/gal) | (tons/yr)/(lbs/hr) | (tons/yr) |
| CO | | 2.00E-03 | 4.38 | |
| NOx | | 1.45E-02 | 4.38 | |
| SOx | | 2.60E-06 | 4.38 | |
| VOCs | | 1.90E-04 | 4.38 | |
| PM-10 | | 4.50E-04 | 4.38 | |

| Reviewed By | Date |
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FORM C: EMISSION CALCULATIONS

TABLE C-7: FACILITY GENERATOR(S)

Table C-7 must be completed in order to calculate the emissions from the facility generators and internal combustion engines, including co-located generators and internal combustion engines, when they are burning diesel fuel, natural gas, or LPG. Emissions, in tons per year, from the generator(s) and internal combustion engine(s) are calculated by taking the maximum capacity listed in column (b) and multiplying it by the emission factor for each pollutant in column (c) and the conversion factor in column (d). An individual table needs to be completed for each generator and internal combustion engine that is located at the facility. Please make additional copies of this form if necessary.

Generator Description: Make: _____ Model: _____ Serial Number: _____

Stack Information: Height Above Ground (feet): _____ Height Above Structure (feet): _____

Exhaust Temperature (°F): _____ Diameter (feet): _____ Velocity (feet/sec): _____

Table C-7(a): Diesel-Fired Generators and Internal Combustion Engines with a Maximum Capacity of Greater Than 600 Horsepower

| Pollutant (a) | Maximum Capacity (b) | Emission Factor (c) | Conversion Factor (d) | Emissions (bxcxd) |
|------------------|-------------------------|------------------------|--------------------------|----------------------|
| | (horsepower) | (lb/hp-hr) | (tons/yr)/(lbs/hr) | (tons/yr) |
| CO | | 5.30E-03 | 4.38 | |
| NO _x | | 2.40E-02 | 4.38 | |
| SO _x | | 3.20E-03 | 4.38 | |
| VOCs | | 7.00E-04 | 4.38 | |
| PM-10 | | 4.50E-04 | 4.38 | |

| Reviewed By | Date |
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Table C-7(b): Diesel-Fired Generators and Internal Combustion Engines with a Maximum Capacity of 600 Horsepower or Less

| Pollutant (a) | Maximum Capacity (b) | Emission Factor (c) | Conversion Factor (d) | Emissions (bxcxd) |
|------------------|-------------------------|------------------------|--------------------------|----------------------|
| | (horsepower) | (lb/hp-hr) | (tons/yr)/(lbs/hr) | (tons/yr) |
| CO | | 6.70E-03 | 4.38 | |
| NO _x | | 3.10E-02 | 4.38 | |
| SO _x | | 2.00E-03 | 4.38 | |
| VOCs | | 2.50E-03 | 4.38 | |
| PM-10 | | 2.20E-03 | 4.38 | |

| Reviewed By | Date |
|----------------|------|
| | |

Table C-7(c): Natural Gas/LPG-Fired Generators and Internal Combustion Engines

| Pollutant (a) | Maximum Capacity (b) | Emission Factor (c) | Conversion Factor (d) | Emissions (bxcxd) |
|------------------|-------------------------|------------------------|---------------------------|----------------------|
| | <i>(horsepower)</i> | <i>(lb/hp-hr)</i> | <i>(tons/yr)/(lbs/hr)</i> | <i>(tons/yr)</i> |
| CO | | 2.90E-03 | 4.38 | |
| NOx | | 2.06E-02 | 4.38 | |
| SOx | | 4.35E-06 | 4.38 | |
| VOCs | | 8.42E-04 | 4.38 | |
| PM-10 | | 7.26E-05 | 4.38 | |

| Reviewed By | Date |
|----------------|------|
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FORM C: EMISSION CALCULATIONS

TABLE C-8: CONTROLLED FUGITIVE PARTICULATE MATTER EMISSIONS FROM THE CRUSHING & SCREENING PLANT

Table C-8(a) has been designed to calculate the emissions from batch drop operations. Examples of batch drop operations include truck dumping onto a storage pile, loading from a storage pile to a truck with a front-end loader, or front-end loader dumping onto a storage pile. Batch drop operations do not include the loading of feed hoppers. Table C-8(b) has been designed to calculate the emissions from the loading of feed hoppers. To calculate the emissions from batch drop operations in tons per year, the maximum throughput rate of the plant listed in column (a) is multiplied by the emission factor in column (b) and the conversion factor in column (c).

Table C-8(a): Calculating Emissions from Batch Drop Operations

| Maximum Throughput Rate (a) | Emission Factor (b) | Conversion Factor (c) | Emissions (a xbxc) |
|-----------------------------|---------------------|-----------------------|----------------------------|
| (tons/hr) | (lb/ton) | (tons/yr)/(lbs/hr) | (tons/yr) |
| | 0.00011 | 4.38 | |

| Reviewed By | Date |
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| | |

Table C-8(b) has been designed to calculate the emissions from the loading of feed hoppers. To calculate the emissions from the loading of feed hoppers in tons per year, the maximum throughput rate of each feed hopper listed in column (a) is multiplied by the emission factor in column (b) and the conversion factor in column (c).

Table C-8(b): Calculating Emissions from the Loading of Feed Hoppers

| Serial # or Equipment ID # | Maximum Throughput Rate (a) | Emission Factor (b) | Conversion Factor (c) | Emissions (a xbxc) |
|------------------------------|-----------------------------|---------------------|-----------------------|----------------------------|
| | (tons/hr) | (lb/ton) | (tons/yr)/(lbs/hr) | (tons/yr) |
| | | 0.000055 | 4.38 | |
| | | 0.000055 | 4.38 | |
| | | 0.000055 | 4.38 | |
| | | 0.000055 | 4.38 | |
| | | 0.000055 | 4.38 | |
| TOTAL PM-10 EMISSIONS | | | | |

| Reviewed By | Date |
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Table C-8(c) has been designed to calculate the emissions from the primary, secondary, and tertiary crushers. To calculate the emissions from the crushers in tons per year, the maximum throughput rate of each crusher listed in column (a) is multiplied by the emission factor in column (b) and the conversion factor in column (c).

Table C-8(c): Calculating Emissions from Crushers

| Serial # or Equipment ID # | Maximum Throughput Rate (a) | Emission Factor (b) | Conversion Factor (c) | Emissions (a xbxc) |
|----------------------------------|-----------------------------------|---------------------------|-----------------------------|-------------------------------|
| | (tons/hr) | (lb/ton) | (tons/yr)/(lbs/hr) | (tons/yr) |
| PRIMARY CRUSHERS | | | | |
| | | 0.00059 | 4.38 | |
| | | 0.00059 | 4.38 | |
| | | 0.00059 | 4.38 | |
| | | 0.00059 | 4.38 | |
| | | 0.00059 | 4.38 | |
| SECONDARY CRUSHERS | | | | |
| | | 0.00059 | 4.38 | |
| | | 0.00059 | 4.38 | |
| | | 0.00059 | 4.38 | |
| | | 0.00059 | 4.38 | |
| | | 0.00059 | 4.38 | |
| TERTIARY CRUSHERS | | | | |
| | | 0.00059 | 4.38 | |
| | | 0.00059 | 4.38 | |
| | | 0.00059 | 4.38 | |
| | | 0.00059 | 4.38 | |
| | | 0.00059 | 4.38 | |
| TOTAL PM-10 EMISSIONS | | | | |

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|------------------------|-------------|
| Reviewed By | Date |
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Table C-8(d) has been designed to calculate the emissions from the screening and fines screening. To calculate the emissions from the screening in tons per year, the maximum throughput rate of each screen listed in column (a) is multiplied by the emission factor in column (b) and the conversion factor in column (c).

Table C-8(d): Calculating Emissions from Screening

| Serial # or Equipment ID # | Maximum Throughput Rate (a) | Emission Factor (b) | Conversion Factor (c) | Emissions (a xbxc) |
|----------------------------------|-----------------------------------|---------------------------|-----------------------------|-------------------------------|
| | (tons/hr) | (lb/ton) | (tons/yr)/(lbs/hr) | (tons/yr) |
| SCREENING | | | | |
| | | 0.00084 | 4.38 | |
| | | 0.00084 | 4.38 | |
| | | 0.00084 | 4.38 | |
| | | 0.00084 | 4.38 | |
| | | 0.00084 | 4.38 | |
| FINES SCREENING | | | | |
| | | 0.0021 | 4.38 | |
| | | 0.0021 | 4.38 | |
| | | 0.0021 | 4.38 | |
| | | 0.0021 | 4.38 | |
| | | 0.0021 | 4.38 | |
| TOTAL PM-10 EMISSIONS | | | | |

| | |
|------------------------|-------------|
| Reviewed By | Date |
| | |

Table C-8(e) has been designed to calculate the emissions from the stackers. To calculate the emissions from the stackers in tons per year, the maximum throughput rate of each stacker listed in column (a) is multiplied by the emission factor in column (b) and the conversion factor in column (c).

Table C-8(e): Calculating Emissions from Stackers

| Serial # or Equipment ID # | Maximum Throughput Rate (a) | Emission Factor (b) | Conversion Factor (c) | Emissions (a x b x c) |
|------------------------------|-----------------------------|---------------------|-----------------------|-------------------------------------|
| | (tons/hr) | (lb/ton) | (tons/yr)/(lbs/hr) | (tons/yr) |
| | | 0.000055 | 4.38 | |
| | | 0.000055 | 4.38 | |
| | | 0.000055 | 4.38 | |
| | | 0.000055 | 4.38 | |
| | | 0.000055 | 4.38 | |
| TOTAL PM-10 EMISSIONS | | | | |

| Reviewed By | Date |
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Table C-8(f) has been designed to calculate the emissions from the transfer points. To calculate the emissions from the transfer points in tons per year, the number of transfer points in column (a) is multiplied by the maximum throughput rate listed in column (b), the emission factor in column (c), and the conversion factor in column (d).

Table C-8(f): Calculating Emissions from Transfer Points

| Number of Transfer Points (a) | Maximum Throughput Rate (b) | Emission Factor (c) | Conversion Factor (d) | Emissions (a x b x c x d) |
|-------------------------------|-----------------------------|---------------------|-----------------------|--|
| | (tons/hr) | (lb/ton) | (tons/yr)/(lbs/hr) | (tons/yr) |
| | | 0.000048 | 4.38 | |
| | | 0.000048 | 4.38 | |
| | | 0.000048 | 4.38 | |
| | | 0.000048 | 4.38 | |
| | | 0.000048 | 4.38 | |
| TOTAL PM-10 EMISSIONS | | | | |

| Reviewed By | Date |
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Table C-8(g) has been designed to calculate the emissions from the pneumatic loading of the lime silo. To calculate the emissions from the pneumatic loading of the lime silo in tons per year, the maximum throughput rate in column (a) is multiplied by the maximum percent of lime added by weight listed in column (b), the control efficiency of the baghouse or wet scrubber in column (c), the emission factor in column (d), and the conversion factor in column (e).

Table C-8(g): Calculating Emissions from Pneumatic Loading of the Lime Silo

| Max. Throughput Rate (a) | Max. Percent of Lime (b) | Control Device Efficiency ? (in %) (c) | Emission Factor (d) | Conversion Factor (e) | Emissions (axbxcxdxe) |
|---|---|---|------------------------------------|--------------------------------------|----------------------------------|
| <i>(tons/hr)</i> | <i>(%/100)</i> | <i>(1-(?/100))</i> | <i>(lb/ton)</i> | <i>(tons/yr)/(lbs/hr)</i> | <i>(tons/yr)</i> |
| | | | 0.11 | 4.38 | |
| | | | 0.11 | 4.38 | |
| | | | 0.11 | 4.38 | |
| TOTAL PM-10 EMISSIONS | | | | | |

| Received By | Date |
|--------------------|-------------|
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Table C-8(h) has been designed to calculate the emissions from the discharging of lime onto conveyor belts. To calculate the emissions from the discharging of lime onto conveyor belts in tons per year, the number of discharge points in column (a) is multiplied by the maximum throughput rate in column (b), the maximum amount of lime added by weight listed in column (c), the emission factor in column (d), and the conversion factor in column (e).

Table C-8(h): Calculating Emissions from Discharging of Lime onto Conveyor Belts

| Number of Discharge Points (a) | Max. Throughput Rate (b) | Max. Percent of Lime (c) | Emission Factor (d) | Conversion Factor (e) | Emissions (axbxcxdxe) |
|---|---|---|------------------------------------|--------------------------------------|----------------------------------|
| | <i>(tons/hr)</i> | <i>(%/100)</i> | <i>(lb/ton)</i> | <i>(tons/yr)/(lbs/hr)</i> | <i>(tons/yr)</i> |
| | | | 0.000048 | 4.38 | |
| | | | 0.000048 | 4.38 | |
| | | | 0.000048 | 4.38 | |
| TOTAL PM-10 EMISSIONS | | | | | |

| Received By | Date |
|--------------------|-------------|
| | |

Table C-8(i) has been designed to calculate the total fugitive particulate matter emissions from the crushing & screening plant. Use the numbers calculated in Tables C-7(a) through C-7(h) to fill out the table below.

Table C-8(i): Total Fugitive Particulate Matter Emissions from the Crushing & Screening Plant

| Emission Source | Total PM-10 Emissions |
|---|-----------------------|
| | (tons/hr) |
| Batch Drop Operations | |
| Loading of Feed Hoppers | |
| Crushers | |
| Screening | |
| Stackers | |
| Transfer Points | |
| Pneumatic Loading of the Lime Silo | |
| Discharging of Lime onto Conveyor Belts | |
| TOTAL PM-10 EMISSIONS FROM ALL SOURCES AT THE CRUSHING AND SCREENING PLANT | |

| Reviewed By | Date |
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FORM C: EMISSION CALCULATIONS

TABLE C-9: CONTROLLED FUGITIVE PARTICULATE MATTER EMISSIONS FROM THE CONCRETE BATCH PLANT

Table C-9 must be completed in order to calculate the fugitive particulate matter emissions from the concrete batch plant. Fugitive emissions, in tons per year, from the concrete batch plant are calculated by taking the maximum capacity listed in column (a) and multiplying it by the emission factor for each pollutant in columns (b) or (c) and the conversion factor in column (d).

| Source of Particulate Emissions | Max. Throughput Rate (a) | PM Emission Factor (b) | PM-10 Emission Factor (c) | Conversion Factor (d) | PM Emissions (axbxd) | PM-10 Emissions (axcxd) |
|--|--------------------------------|----------------------------|------------------------------|---------------------------|-------------------------|-------------------------------|
| | <i>(tons/hr)</i> | <i>(lb/ton of asphalt)</i> | <i>(lb/ton of asphalt)</i> | <i>(tons/yr)/(lbs/hr)</i> | <i>(tons/year)</i> | <i>(tons/year)</i> |
| Continuous and Batch Drop Operations onto Aggregate Storage Piles | | 2.00E-04 | 9.70E-05 | 4.38 | | |
| Continuous and Batch Drop Operations onto Sand Storage Piles | | 3.60E-05 | 1.70E-05 | 4.38 | | |
| Aggregate Transfer to Feed Hopper | | ND* | 1.70E-04 | 4.38 | | |
| Sand Transfer to Feed Hopper | | ND* | 1.70E-05 | 4.38 | | |
| Aggregate Transfer to Elevated Bins | | ND* | 9.70E-05 | 4.38 | | |
| Sand Transfer to Elevated Bins | | ND* | 1.70E-05 | 4.38 | | |
| Aggregate Transfer to Weigh Hoppers | | ND* | 9.70E-05 | 4.38 | | |
| Sand Transfer to Weigh Hoppers | | ND* | 1.70E-05 | 4.38 | | |
| Cement Transfer to Silos | | 1.50E-04 | 5.10E-05 | 4.38 | | |
| Mixer Loading (Truck Mix) | | 2.80E-02 | 7.50E-03 | 4.38 | | |
| Mixer Loading (Central Mix) | | 1.80E-03 | 6.00E-04 | 4.38 | | |

| Source of Particulate Emissions | Number of Transfer/ Screening Points (a) | PM Emission Factor (b) | PM-10 Emission Factor (c) | Conversion Factor (d) | PM Emissions (axbxd) | PM-10 Emissions (axcxd) |
|--------------------------------------|--|------------------------|---------------------------|-----------------------|----------------------|-------------------------|
| | | (lb/hr/point) | (lb/hr/point) | (tons/yr)/(lbs/hr) | (tons/year) | (tons/year) |
| Conveyor Transfer Points (Aggregate) | | 8.00E-05 | 3.00E-05 | 4.38 | | |
| Conveyor Transfer Points (Sand) | | 5.00E-05 | 2.00E-05 | 4.38 | | |

To calculate the total PM and PM-10 emissions from all fugitive sources, add up all PM and PM-10 emissions from Table C-9.

| Source of Particulate Emissions | PM Emissions | PM-10 Emissions |
|---|--------------|-----------------|
| | (tons/year) | (tons/year) |
| TOTAL PM AND PM-10 EMISSIONS FROM ALL HOT MIX ASPHALT PLANT FUGITIVE SOURCES | | |

| Reviewed By | Date |
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FORM C: EMISSION CALCULATIONS

TABLE C-10: TOTAL EMISSIONS FROM THE FACILITY

Table C-10 has been designed to calculate the total emissions from the hot mix asphalt plant and co-located crushing & screening plant and/or concrete batch plant (if applicable). Use the numbers calculated in Tables C-1 through C-9 to complete the table(s) below. If the applicant desires to use more than one type of fuel for a single piece of equipment, the highest emissions from the various fuels should be included in this table. If there is more than one asphalt heater and/or generator being utilized at the facility, be sure to include the sum of the emissions from each asphalt heater and generator in the table below.

| Pollutant | Rotary Drum Dryer Emissions (Table C-1 thru C-4) | Controlled Hot Mix Asphalt Plant Fugitive Emissions (Table C-5) | Asphalt Heater(s) Emissions (Table C-6) | Facility Generator(s) Emissions (Table C-7) | Crushing & Screening Plant Fugitive Emissions (Table C-8) | Concrete Batch Plant Fugitive Emissions (Table C-9) | Total Emissions |
|-----------------|--|--|--|--|--|--|-----------------|
| | (tons/year) | (tons/year) | (tons/year) | (tons/year) | (tons/year) | (tons/year) | (tons/year) |
| CO | | | | | | | |
| NO _x | | | | | | | |
| SO _x | | | | | | | |
| VOCs | | | | | | | |
| PM | | | | | | | |
| PM-10 | | | | | | | |

| Reviewed By | Date |
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FORM D: SYNTHETIC MINOR LIMIT CALCULATIONS

1. *Calculate the synthetic minor operating hours limitation*

- A. What is the largest number of potential emissions in tons per year from the total emissions column from Table C-10 above? _____
- B. Which pollutant does this number represent? _____
- C. To calculate the synthetic minor limit, use the number from Question A above in the following equation.

$$(90/A) \times 8760 \text{ hours/year} = \text{Allowable Operating Hours for Synthetic Minor Limitation}$$

Allowable Operating Hours for Synthetic Minor Limitation: _____ hours per year

FORM E: EQUIPMENT LIST

The following table should include all equipment utilized at the facility and be complete with all data requested. The date of manufacture must be included in order to determine if portions of the facility are NSPS applicable. Make additional copies of this form if necessary.

| Type of Equipment | Maximum Rated Capacity | Make | Model | Serial Number | Date of Manufacture | Equipment ID Number |
|-------------------|---------------------------|------|-------|---------------|------------------------|------------------------|
| | | | | | | |
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FORM F: AIR POLLUTION CONTROL EQUIPMENT

This table is intended to assist the applicant in listing the air pollution controls that are utilized at the facility. This table should be completed by checking each emission point with the appropriate control device. Shaded boxes represent air pollution control devices which are not typically utilized with the referenced emissions points.

| Air Pollution Control Device | Rotary Drum Dryer | Crushers | Screens | Transfer Points | Stackers | Haul Roads | Storage Piles | Material Handling (Front End Loaders) | Feed Hoppers | Elevated Bins/ Weigh Hoppers | Cement Silo | Mixer Loading (Truck Mix) | Mixer Loading (Central Mix) |
|--------------------------------------|-------------------|----------|---------|-----------------|----------|------------|---------------|---------------------------------------|--------------|------------------------------|-------------|---------------------------|-----------------------------|
| Spray Bars | | | | | | | | | | | | | |
| Sprinklers | | | | | | | | | | | | | |
| Water Truck | | | | | | | | | | | | | |
| Water Hose | | | | | | | | | | | | | |
| Chemical Surfactant/ Dust Palliative | | | | | | | | | | | | | |
| Venturi Scrubber | | | | | | | | | | | | | |
| Baghouse | | | | | | | | | | | | | |
| Other (Please Specify) | | | | | | | | | | | | | |
| Other (Please Specify) | | | | | | | | | | | | | |

For each venturi scrubber or baghouse, please provide the rated efficiency of the equipment below.

- Type of Equipment (i.e. venturi scrubber or baghouse): _____
Rated Efficiency of Equipment (in percent): _____
- Type of Equipment (i.e. venturi scrubber or baghouse): _____
Rated Efficiency of Equipment (in percent): _____

FORM G: COMPLIANCE CERTIFICATION AND CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS

Certification of Compliance with all Applicable Requirements:

This certification must be signed by a Responsible Official. Applications without a signed certification will be deemed incomplete.

The responsible official is defined as a person who is in charge of principal business functions or who performs policy or decision making functions for the business. This may also include a authorized representative for such persons. For a complete definition see the Arizona Administrative Code, Title 18, Chapter 2, Section R18-2-301.

I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by ADEQ as public record. I also attest that I am in compliance with the applicable requirements listed in Section 1 and will continue to comply with such requirements and any future requirements that become effective during the life of my permit. I will present a certification of compliance to ADEQ no less than annually and more frequently if specified by ADEQ. I further state that I will assume responsibility for the construction, modification, or operation of the source in accordance with Arizona Administrative Code, Title 18, Chapter 2 and any permit issued thereof.

Name (Print/Type): _____

(Signature): _____ Date: _____

Certification of Truth, Accuracy, and Completeness Arizona Administrative Code R18-2-304.H.

R18-2-304.H. Certification of Truth, Accuracy, and Completeness. Any application form, report, or compliance certification submitted pursuant to this Chapter shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this Article shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

By my signature I, _____, hereby certify that based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate, and complete.

Name (Print/Type): _____

(Signature): _____ Date: _____

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY DIVISION

Notice of Start-up, Move or Stop For Portable Sources

Pursuant to Arizona Administrative Code (AAC), Title 18, Chapter 2, Article 324, a portable source may be transferred from one location to another provided that the owner or operator of such equipment notifies the Director and any control officer who has jurisdiction over the geographic area. This notification should include the new location of the transfer and be **submitted by certified mail at least ten (10) working days before the transfer**. Submit a separate report for each valid permit.

1. GENERAL INFORMATION:

| | | | |
|-----------------------|--|------------|--|
| Company Name: | | | |
| Facility name: | | | |
| Air Quality Permit #: | | | |
| Mailing Address: | | | |
| City, State, ZIP: | | | |
| Contact Person: | | Telephone: | |

2. EQUIPMENT INFORMATION:

| Equipment Description | ATO # | Equipment ID | Serial # | Rated Capacity |
|-----------------------|-------|--------------|----------|----------------|
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3. LOCATION INFORMATION:

| | | | |
|--|-------------|--|--|
| <u>CURRENT LOCATION</u> Address: | | | |
| City, State, ZIP | | | |
| Driving Directions | | | |
| <u>NEW LOCATION</u> Address: | | | |
| City, State, ZIP | | | |
| Driving Directions | | | |
| Does the new location have access to water and electricity for the operation of control equipment? | Yes No | If No, specify how emissions will be controlled: | |

4. DATES & SIGNATURE:

| | | | |
|--|--|--|--|
| Date operation ceased at current location: | | Proposed date of start-up at new location: | |
| Signature : | | | |
| Print Name & Title : | | | |

For Internal Use Only:

| | | | | | |
|--------------------|--|------------------|--|---------------------|--|
| Engineer Initials: | | Data Entry Date: | | Secretary Initials: | |
|--------------------|--|------------------|--|---------------------|--|

| Equipment Description | ATO # | Equipment ID | Serial # | Rated Capacity |
|-----------------------|-------|--------------|----------|----------------|
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COMMENTS:

FORM I - FEES SUMMARY

| Fee Rule Summary for Class II Sources | | | | | | | | | |
|---|--|--|--|--|---|--|--|--|--|
| SOURCE | | | | | | | | | |
| CLASS II | | | | | | | | | |
| TITLE V | | | | | NON TITLE V | | | | |
| INDIVIDUAL | | | GENERAL PERMIT | | INDIVIDUAL | | | GENERAL PERMIT | |
| <div>PROCESSING FEE \$66/hr No maximum Fee</div> | | | <div>APPLICATION FEE \$500</div> <div><div>ANNUAL ADMINISTRATIVE FEE</div><div>Small Source: \$500 Others: \$3,000</div></div> | | <div>PROCESSING FEE \$66/HOUR \$25,000 MAXIMUM FEE</div> | | | <div>ANNUAL INSPECTION FEE Stationary Sources: \$3,250 Portable Sources: \$3,250 Gasoline Service Station: \$500</div> | |
| <div>ACCELERATED PERMIT APPLICATION FEE \$15,000</div> | | | | | <div>ACCELERATED PERMIT APPLICATION FEE \$15,000 \$25,000 MAXIMUM FEE</div> | | | <div>APPLICATION FEE \$500</div> | |
| <div><div>ANNUAL FEE</div><div>Administrative Synthetic Minor Sources - Except Portables</div><div>Aerospace: \$12,900 Cement plants: \$39,500 Combustion/Boilers: \$9,600 Compressor stations: \$7,900 Electronics: \$12,700 Expandable Foam: \$9,100 Foundries: \$12,100 Landfills: \$9,900 Lime Plants: \$37,300 Copper & Nickel Plants: \$9,300 Gold Mines: \$9,300 Mobile Home manufacturing: \$9,200 Paper Mills: \$12,700 Paper Coaters: \$9,600 Petroleum Products Terminal facilities: \$14,100 Polymeric Fabric Coaters: \$12,700 Reinforced Plastics: \$9,600 Semiconductors Fabrication: \$16,700 Copper Smelters: \$39,500 Utilities-Natural Gas: \$10,200 Utilities-Fossil Fuel except Natural Gas: \$20,200 Vitamin/Pharmaceutical Manufacturing: \$9,800 Wood Furniture: \$9,600 Others: \$9,900 Others with Continuous Emission Monitoring: \$12,700 Stationary Source: \$5,000 Portable Source: \$5,000 Small Source: \$500</div></div> | | | | | | | | <div>ANNUAL INSPECTION FEE Gasoline Service Station: \$500 Crematorium: \$1,000 Others: \$2,000</div> | |
| <div>Notes:</div> <div>There is no fee for transfers, administrative amendments, or 317 changes of permits. The fee rate will be adjusted in the beginning of each year based on the CPI index. Administrative and Inspection fees are due each year no later than March 31st or 60 days after the Director mails the invoice, whichever is later. Information for this table was taken from the A.A.C. R18-2-326 and R18-2-511</div> | | | | | | | | | |